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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,191	12/15/2000	Young-Kung Kim	P-169	8457

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EXAMINER

LAM, DANIEL K

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,191

Applicant(s)

KIM ET AL.

Examiner

Daniel K Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 4.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. **Claims 1-20** are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Pat. No. 6,434,612 issued to Hughes et al (hereinafter Hughes).

Regarding **claims 1, 6, and 12**, Hughes discloses a connection control interface utilizing Virtual Switch Interface (VSI) that provides generic GSMP functionalities and a method for controlling hardware resources for an ATM switch system comprising:

- a. A VSI master 518 (see figure 9) resides in a hardware processor separated from an ATM switch 502 (A master function unit mounted at a processor board existing outside a switching system; claim 1. A master function unit for performing master function of a standard protocol; claim 6). See col. 8, lines 14-18.

- b.* Networks switch 100 (see figure 2) comprising controller 105, trunk module 110, service modules 115 and 120. The controller 105 transfers command and configuration information to the target trunk and service modules using command bus 127. (A protocol processing function unit mounted at a processor board existing in the switching system; claim 1. A protocol-processing unit for interfacing with the master function unit; claim 6. Receiving a resource control message through a standard protocol from a protocol master and transmitting a resource control message from a protocol processing function unit to the resource control function unit; claim 12). See col. 2, lines 12-18.
- c.* Within the ATM switch 502 (see figure 9), a VSI slave 522 communicates with the VSI master 518 using VSI and receiving control messages from the master. The VSI slave controls the switch hardware (A plurality of resource control function units for receiving a control message and actually controlling a hardware resource; claim 1. A plurality of resource control function unit for analyzing a control request message, controlling, and managing a hardware resource; claim 6. Performing a controlling operation for an actual hardware according to the type of control message; claim 12). Also col. 8, lines 14-18.
- d.* A PNNI application VSI controller 510 (see figure 9) interfaces with the VSI master 518 using VSI API 514 for controlling the private network-to-network interfaces within the ATM switch (An application program for controlling the ATM switching system through the master function unit; claim 6).

Regarding **claims 2 and 13**, in addition to disclose the limitations in claims 1 and 12 discussed earlier, Hughes further discloses that each VSI controller 402 has a VSI master 408 that communicates with a VSI slave 430 using VSI protocol (The master function unit and the protocol processing slave function unit performs standard protocol). See fig. 8, and col. 7, lines 62-67.

Regarding **claims 3 and 7**, in addition to disclose the limitations in claims 2 and 6 discussed earlier, Hughes further discloses that VSI provides same functionalities as the General Switch Management Protocol, such as connection setup. (The standard protocol is a general switch management protocol). See col. 5, lines 13-29.

Regarding **claims 4, 8 and 14**, in addition to disclose the limitations in claims 1, 6 and 12 discussed earlier, Hughes further discloses that, in the network switch 100, the controller 105 (the protocol processing function unit mounted only at one of the processor boards), trunk module 110, and service modules 115 and 120 are separately located in different modules in the system (the resource control function units are separately mounted at each processor board). They are connected by data path bus 125 and command bus 127. See fig. 2, and col. 1, lines 38-44.

Regarding **claims 5 and 11**, in addition to disclose the limitations in claims 4 and 6 discussed earlier, Hughes further discloses that the VSI slaves 520 and 522 communicate with each other via an INTER-SLAVE MESSAGING path (see figure 9) to exchange information (plurality of resource control function units inter-work with each other).

Regarding **claims 9 and 18**, in addition to disclose the limitations in claims 6 and 12 discussed earlier, Hughes further discloses that, in the network switch 100, the controller 105 translates a protocol message into a format that is suitable for the target or service module (the protocol processing function unit analyzes port information included in the received control request message). Then it transfers the message to the target trunk or service module using command bus 127 (transmits a corresponding resource control message to one of the plurality of resource control function units). See fig. 2, and col. 2, lines 12-18.

Regarding **claim 10**, in addition to disclose the limitations in claim 6 discussed earlier, Hughes further discloses that at least four categories of messages are defined by the VSI. For example, a connection request message allows the master to request the slave to setup of a connection (the protocol processing unit generates a child process for performing an appropriate function according to the type of the control request). See col. 12, lines 19-20.

Regarding **claim 15**, in addition to disclose the limitations in claim 12 discussed earlier, Hughes further discloses that at least four categories of messages are defined by the VSI. For example, a connection request message allows the master to request the slave to setup of a connection (the resource connection message is a connection control message). See col. 12, lines 19-20. Furthermore, the VSI slaves 520 and 522 communicate with each other via an inter-slave messaging path to exchange information (the resource control function inter-work with others). See fig. 9, INTER-SLAVE MESSAGING.

Regarding **claims 16 and 19**, in addition to disclose the limitations in claim 12 discussed earlier, Hughes further discloses that

- The VSI master and VLSI slaves are synchronized by exchanging database information in order to get into a known state (Performing binding and synchronization with resource control function units, and performing synchronization with the protocol master; claim 16. Performing binding and synchronizing with the protocol processing function unit; claim 19). See col. 12, line 66 to col. 13, line 4.
- At least four categories of messages (resource control message) are defined by the VSI. For example, a connection request message allows the master (protocol master) to request the slave (resource control function unit) to setup of a connection. In response, the slave checks for message errors, performances the connection, and returns a connection request response message back to the master (Being in standby state for receiving resource control message from the protocol master, checking a protocol error, generates an appropriate message to the resource control function unit; claim 16. Being in standby state for receiving the resource control message from the protocol processing function unit, checking an error, and generating an appropriate message; claim 19). See col. 12, lines 19-24.
- During initialization, user configures the switch and control ports (Transmitting the configuration information of the switching system to the protocol processing function unit; claim 19). See col. 14, lines 54-56.

Regarding **claims 17 and 20**, in addition to disclose the limitations in claims 16 and 19 discussed earlier, Hughes further discloses that there are at least four categories of

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messages defined: namely, connection request, connection response, interface information, and switch information messages. The master sends connection request and interface information messages to the slave through the protocol-processing unit (Subroutine for transmitting a connection control request and a statistics request messages; claim 17)). On the other hand, information message is sent by the slave to inform the master when configuration or state has changed (Subroutine for processing configuration request/change or state change from the resource controller unit (claim 17) or an operation maintenance block (claim 20)). See col. 12, lines 19-30.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel K. Lam whose telephone number is (703) 305-8605. The examiner can normally be reached on Monday-Friday from 8:30 AM to 4:30 PM.


If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status Information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKL *dhe*
April 22, 2004


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 4/22/04